



AT-PBC18

*Rackmountable Chassis for use with
PowerBlade Series Modules*

Quick Install Guide

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Electrical Safety and Emission Compliance Statement

This product meets the following standard:


RFI Emission EN55022 Class A, EN61000-3-2, EN61000-3-3  **1**


Warning: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.  **2**


Immunity EN55024  **3**

Electrical Safety TUV-EN60950, UL1950, (UL/cUL)  **4**


Laser EN60825  **5**


Important: Appendix B contains translated safety statements for installing this equipment. When you see the , go to Appendix B for the translated safety statement in your language.


Wichtig: Anhang B enthält übersetzte Sicherheitshinweise für die Installation dieses Geräts. Wenn Sie  sehen, schlagen Sie in Anhang B den übersetzten Sicherheitshinweis in Ihrer Sprache nach.


Vigtigt: Tillæg B indeholder oversatte sikkerhedsadvarsler, der vedrører installation af dette udstyr. Når De ser symbolet , skal De slå op i tillæg B og finde de oversatte sikkerhedsadvarsler i Deres eget sprog.


Belangrijk: Appendix B bevat vertaalde veiligheidsopmerkingen voor het installeren van deze apparatuur. Wanneer u de  ziet, raadpleeg Appendix B voor vertaalde veiligheidsinstructies in uw taal.


Important: L'annexe B contient les instructions de sécurité relatives à l'installation de cet équipement. Lorsque vous voyez le symbole , reportez-vous à l'annexe B pour consulter la traduction de ces instructions dans votre langue.

Tärkeää: Liite B sisältää tämän laitteen asentamiseen liittyvät käännettyä turvaohjeet. Kun näet -symbolin, katso käännettyä turvaohjetta liitteestä B.

Importante: l'Appendice B contiene avvisi di sicurezza tradotti per l'installazione di questa apparecchiatura. Il simbolo , indica di consultare l'Appendice B per l'avviso di sicurezza nella propria lingua.

Viktig: Tillegg B inneholder oversatt sikkerhetsinformasjon for installering av dette utstyret. Når du ser , åpner du til Tillegg B for å finne den oversatte sikkerhetsinformasjonen på ønsket språk.

Importante: O Anexo B contém advertências de segurança traduzidas para instalar este equipamento. Quando vir o símbolo , leia a advertência de segurança traduzida no seu idioma no Anexo B.

Importante: El Apéndice B contiene mensajes de seguridad traducidos para la instalación de este equipo. Cuando vea el símbolo , vaya al Apéndice B para ver el mensaje de seguridad traducido a su idioma.


Obs! Bilaga B innehåller översatta säkerhetsmeddelanden avseende installationen av denna utrustning. När du ser , skall du gå till Bilaga B för att läsa det översatta säkerhetsmeddelandet på ditt språk.

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Welcome to Allied Telesyn

This guide contains instructions on how to install an AT-PBC18 PowerBlade Chassis. This guide also contains instructions on how to install the AT-PBC18 in a 19-, 23-, or 25-inch rack and how to install PowerBlade Series Modules.

Where to Find Related Guides

The Allied Telesyn web site at **www.alliedtelesyn.com** offers you an easy way to access the most recent documentation, software, and technical information for all of our products. For product guides, select “Support & Services” from our web site.

After you have performed the procedures in this quick install guide, you should download the following guides from our web site:

PowerBlade PBC18 Installation Guide

PN 613-50144-00

AT-S31 User’s Guide

PN 613-50205-00

The installation and user’s guide contains complete details on the features, functions and installation instructions for the PowerBlade Series Modules.

Document Conventions

This guide uses the following conventions:

Note

Notes provide additional information.

**Caution**

Cautions indicate that performing or omitting a specific action may result in equipment damage or loss of data.

**Warning**

Warnings indicate that performing or omitting a specific action may result in bodily injury.

Contacting Allied Telesyn Technical Support

You can contact Allied Telesyn technical support online or by telephone or e-mail.

Online Support

You can request technical support online by accessing the Knowledge Base at **<http://kb.alliedtelesyn.com>**. You can use the Knowledge Base to submit questions to our technical support staff and review answers to previously asked questions.

Telephone Support

For technical support by telephone, contact Allied Telesyn at one of the following locations:

Americas

United States, Canada, Mexico,
Central America, South America
Tel: 1 (800) 428-4835

Germany

Switzerland, Austria, Eastern Europe
Tel: (+49) 30-435-900-126

Asia

Singapore, Taiwan, Thailand,
Malaysia, Indonesia, Korea,
Philippines, China, India, Hong Kong
Tel: (+65) 3815-612

Italy

Spain, Portugal, Greece, Turkey, Israel
Tel: (+39) 02-41-30-41

Australia

Tel: 1 (800) 000-880

France

Belgium, Luxembourg, The Netherlands, Middle East, Africa
Tel: (+33) 0-1-60-92-15-25

Japan

Tel: (+81) 3-3443-5640

United Kingdom

Denmark, Norway, Sweden, Finland, Iceland
Tel: (+0044) 1235-442500

E-mail Support

Latin America, Mexico, Puerto Rico, Caribbean, and Virgin Islands

latin_america@alliedtelesyn.com

United Kingdom, Sweden, Norway, Denmark, and Finland

support_europe@alliedtelesyn.com

Returning Products

Products for return or repair must first be assigned a Return Materials Authorization (RMA) number. A product sent to Allied Telesyn without a RMA number will be returned to the sender at the sender's expense.

To obtain an RMA number, contact Allied Telesyn's Technical Support at one of the following locations:

North America

Toll-free: 1-800-762-1664

Fax: 1-425-806-1050

Europe, Africa, and the Middle East

Tel: +44-1793-501401

Fax: +44-1793-431099

Latin America, the Caribbean, Virgin Islands

Tel: international code + 425-481-3852

Fax: international code + 425-481-3895

Asia and Southeast Asia

Tel: +65-381-5612

Fax: +65-383-3830

Mexico

Toll-free: 1-800-424-5012, ext 3852

Fax: international code + 425-481-3895

Puerto Rico

Toll-free: 1-800-424-5012, ext 3852
or 1-800-424-4284, ext 3852

Australia

Toll-free: 1-800-000-880

Fax: + 61-2-9438-4966

New Zealand

Toll-free: 0800-45-5782

Fax: +65-383-3830

FTP Server

If you need management software for an Allied Telesyn managed device and you know the file name of the software, you can download the software by connecting directly to our FTP server at **ftp://alliedtelesyn.com**. At login, enter 'anonymous' for the user name and your e-mail address for the password.

For Sales or Corporate Information

You can contact Allied Telesyn for sales or corporate information at the location below:

Allied Telesyn, Inc.

19800 North Creek Parkway, Suite 200

Bothell, WA 98011

Tel: 1 (425) 487-8880

Fax: 1 (425) 489-9191

Tell Us What You Think

If you have any comments or suggestions on how we might improve this or other Allied Telesyn documents, please fill out the General Enquiry Form online. This form can be accessed by selecting "Contact Us" from **www.alliedtelesyn.com**.

Chapter 1

Overview

The PowerBlade PBC18 is an 18-slot chassis that is designed to hold up to 18 PowerBlade Media Converters and Switches. The chassis can be used on a desktop or installed in a 19-, 23- or 25-inch rack.

The front of the chassis has 18-slots for PowerBlade modules along with six LEDs to notify you of power and management status. The chassis also has a Reset button that allows you to reset the optional management module. (See Figure 1) The back of the chassis features a PWR 1 expansion slot, for the main power supply; a PWR 2 expansion slot, for an optional redundant power supply; and an optional management module expansion slot. (See Figure 2)

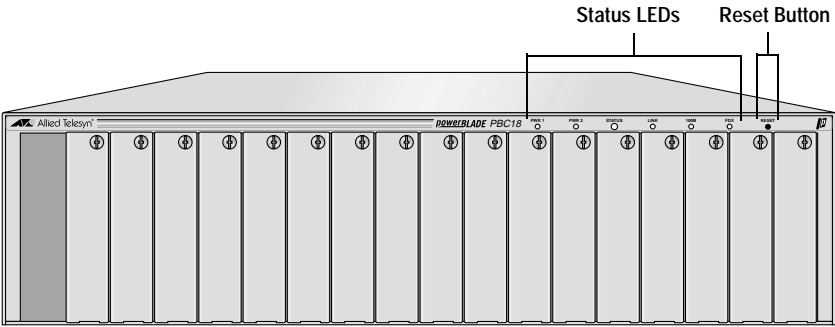


Figure 1 PowerBlade PBC18 Front View

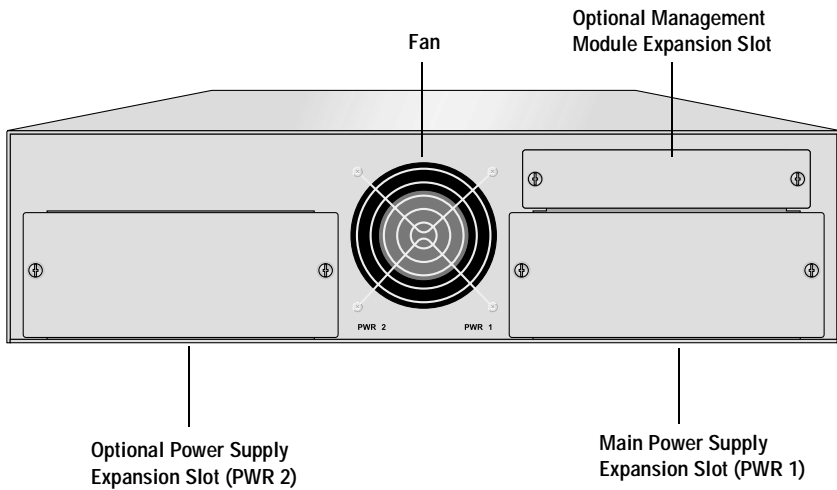


Figure 2 PowerBlade PBC18 Back View

Key Features

- ☐ 18-slots to “mix and match” hot swappable PowerBlade modules
- ☐ LEDs on the front of the chassis for power and management status
- ☐ Desktop or rackmount installation
- ☐ Front mounted Reset button (for use with the management module only)
- ☐ Hot swappable AC or DC power supplies
- ☐ An expansion slot for the main power supply and an optional redundant power supply
- ☐ One expansion slot for an optional management module

Status LEDs

Table 1 defines the power and management LEDs.

Table 1 Status LEDs

LED	Color	Description
Power Modules		
PWR1	Green	The main power supply is functioning normally.
PWR2	Green	The optional redundant power supply, if installed, is functioning normally.
Management Module		
Status	Amber	The module is performing a self-test.
	Flashing Amber	The module is downloading the firmware from a host PC.
	Red	The module or management software is malfunctioning.
	Green	The module is installed and online.
LINK	Green	A valid link has been detected on the RJ-45 port.
100M	Not used at this time.	
FDX	Not used at this time.	

Power Supply

The PowerBlade PBC18 can be either an AC or DC powered chassis. The expansion slot for the main power supply and the optional redundant power supply are located on the back of the chassis. Refer to Figure 2.

The main and redundant power supply can be “hot swapped,” meaning that should either power supply fail, the failed power supply can be removed and replaced with a new power module while the chassis is operating. Network operations will not be interrupted. The power modules to be hot swapped must be the same type. For example, both power supplies must be AC or both must be DC.

Powering ON or OFF the chassis depends on the type of power supply installed. For an AC model, you connect or disconnect the power cord. For a DC model, you connect or disconnect the DC power cables or power OFF the DC circuit to which the power supply is connected.

For instructions on hot swapping, refer to “Hot Swapping a Power Supply” on page 25.

AC Power Supply

The AC power supply operates at 100-120/200-240 V AC with an input frequency of 50/60 Hz at $\pm 3\%$. Figure 3 shows an PowerBlade PBC18 with an AC power supply.

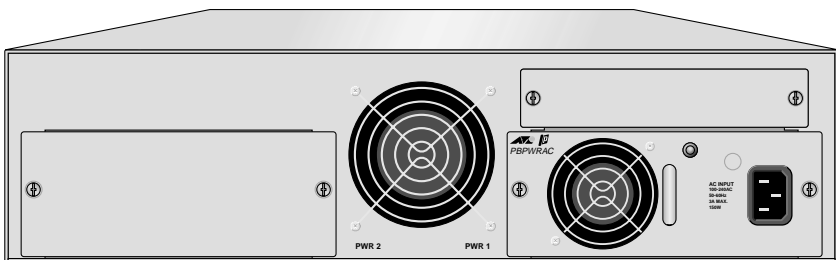


Figure 3 PowerBlade PBC18 with an AC Power Supply

DC Power Supply

The DC power supply has a 48 V DC terminal block connector. Figure 4 shows an PowerBlade PBC18 with a DC power supply.

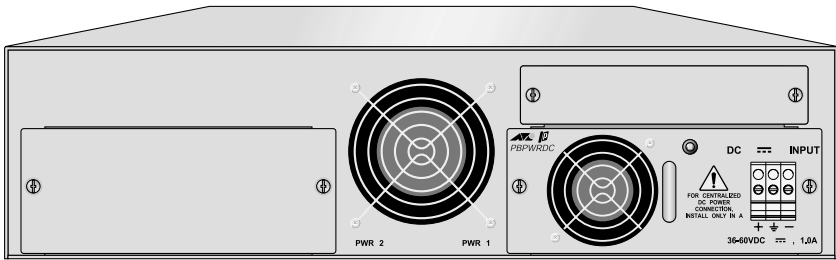


Figure 4 PowerBlade PBC18 with a DC Power Supply

Optional Management Module

The management module is an optional module used to monitor the operating status of the switches and media converters installed in the PowerBlade PBC18. Refer to Figure 2 on page 2 for the location of the expansion slot. The management module is not required for the chassis to operate, but it is necessary if you want to locally or remotely monitor and configure the modules and ports.

The management module features a Link, Power, and Status LED as well as a Reset button. (See Figure 5) The LEDs and the Reset button are duplicated on the front of the chassis for easy monitoring or to reset the management module. You may need to reset the module after completing the installation, adding or hot swapping a power supply, or after upgrading the module's firmware.

To install an optional management module, refer to “Installing an Optional Management Module” on page 27.

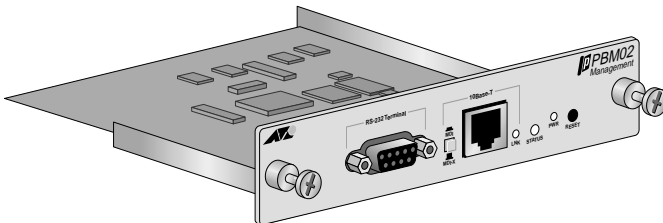


Figure 5 Optional Management Module (AT-PBM02 Model)

Chapter 2

Installing the PowerBlade PBC18

This chapter explains how to install the chassis on a desktop or in a 19-, 23- or 25-inch rack.

Verifying Package Contents

Make sure the following items are included in your package. If any item is missing or damaged, contact your Allied Telesyn sales representative for assistance.

- ☐ One PowerBlade PBC18 Chassis
- ☐ One rackmounting kit
- ☐ Four protective rubber feet (for desktop use only)
- ☐ This quick install guide
- ☐ Warranty card

Preparing the Site

Be sure to observe the following guidelines when planning the installation of your chassis.

- ☐ Make sure that the chassis' power is accessible and cables can be easily connected.
- ☐ Cables must be away from sources of electrical noise such as radios, transmitters, broadband amplifiers, power lines, fluorescent or halogen light fixtures.
- ☐ Air flow around the chassis and through its vents on the side and back should not be restricted.
- ☐ If you are using the chassis on a desktop, make sure it is placed on a level, secure surface.
- ☐ Do not place objects on top of the chassis.

- ☐ Do not expose the chassis to moisture or water.
- ☐ Make sure it is in a dust-free environment.
- ☐ Use dedicated power circuits or power conditioners to supply reliable electrical power to the network devices.

Reviewing Safety Precautions

Please review the following safety precautions before you install the chassis and the PowerBlade modules. (The first warning applies only if you purchased a module with a fiber optic port.)



Warning

Do not stare into the laser beam. ⚡ 7



Warning

Electric Shock Hazard: To prevent electric shock, do not remove the cover. There are no user-serviceable parts inside. The unit contains hazardous voltages and should only be opened by a trained and qualified technician. ⚡ 8



Warning

Lightning Danger: Do not work on this equipment or cables during periods of lightning activity. ⚡ 9



Caution

Power cord is used as a disconnection device: To de-energize equipment, disconnect the power cord. (AC model only) ⚡ 10



Warning

Electrical-Type Class 1 Equipment: This equipment must be earthed. The power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts. ⚡ 11



Caution

Pluggable Equipment: The socket outlet should be installed near the equipment and should be easily accessible. ⚡ 12



Caution

Air vents: The air vents must not be blocked on the unit and must have free access to the room ambient air for cooling. 13



Caution

Operating Temperature: This product is designed for a maximum ambient temperature of 40°C. 14



Caution

All Countries: Install this product in accordance with local and National Electric Codes. 15



Caution

Lithium Battery - Should only be changed by trained and qualified technician.

Danger of explosion if battery incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Attention: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant. 21

Installing the PowerBlade PBC18 on a Desktop

This section explains how to install the chassis on a desktop. To install the chassis in a rack, refer to “Installing the PowerBlade PBC18 in a Rack” on page 14.

For desktop installation, perform the procedure below:

1. Remove all the items from the shipping package and store the packaging material in a safe location. In case you need to return the chassis to Allied Telesyn, you will need to ship the unit back using as much of the original packaging material as possible.
2. Place the chassis upside down on a level, secure surface.
3. Attach one of the rubber feet to each corner of the chassis, then turn the chassis right side up. See Figure 6.

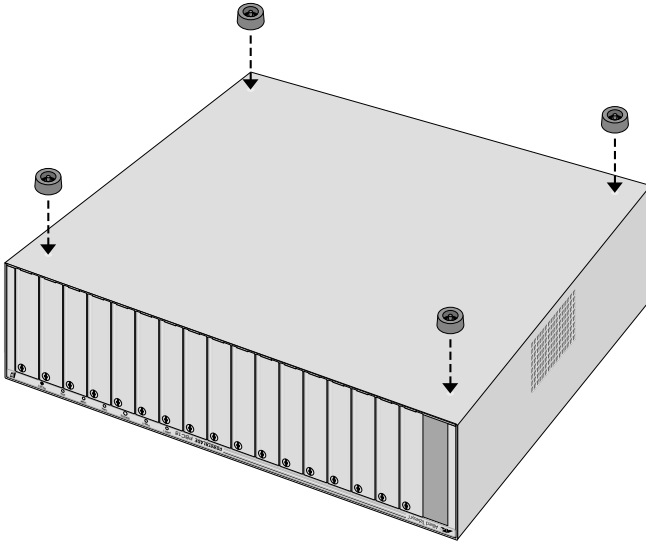


Figure 6 Attaching the Rubber Feet



Caution

Power cord is used as a disconnection device: To de-energize equipment, disconnect the power cord. (AC model only.) ⚡ 10

4. For an AC powered unit, plug one end of the power cord to the back of the power supply and plug the other end to a power outlet. Proceed to Step 6 on page 13 for further instructions.

Note

If you purchased an optional management module, install the module before applying power to the chassis. Refer to “Installing an Optional Management Module” on page 27 for instructions.

5. For a DC powered unit, perform the following steps:
 - a. Before attaching wires to the DC terminal block on the power module, review the following warning:



Warning

As a safety precaution, a 10 Amp circuit breaker should be installed at the supply end of the cable to be used with this LAN equipment.

Always connect the wiring to the LAN equipment first before connecting the wiring to the breaker. To avoid the danger of physical injury from electrical shock, do not work with hot feeds. Always be sure that the breaker is in the OFF position before connecting the wiring to the breaker. ⚡ 16

- b. Identify the **positive**, frame **ground** and **negative** terminals using the positive (+), ground (\perp), and negative (-) symbols.

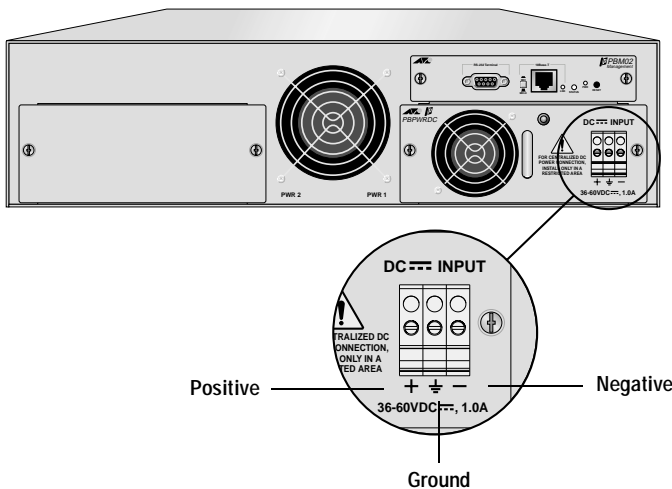


Figure 7 Positive, Ground, and Negative Symbols

- c. Strip the three wires in the cable tray coming from the DC input power source to 8 millimeters \pm 1 millimeters (0.31 inches \pm 0.039 inches) using a 14-gauge wire-stripping tool.



Warning

Do not strip more than the recommended amount of wire. Stripping more than the recommended amount can create a safety hazard by leaving exposed wire on the terminal block after installation. *See* 17

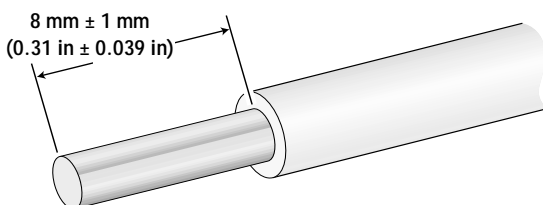


Figure 8 Stripped Wire

- d. Connect the frame ground wire to the terminal marked with the ground symbol by inserting the wire into the terminal block and tightening the connection with a flathead screwdriver. See Figure 9.



Warning

When installing this equipment, always ensure that the frame ground connection is installed first and disconnected last. *See* 18

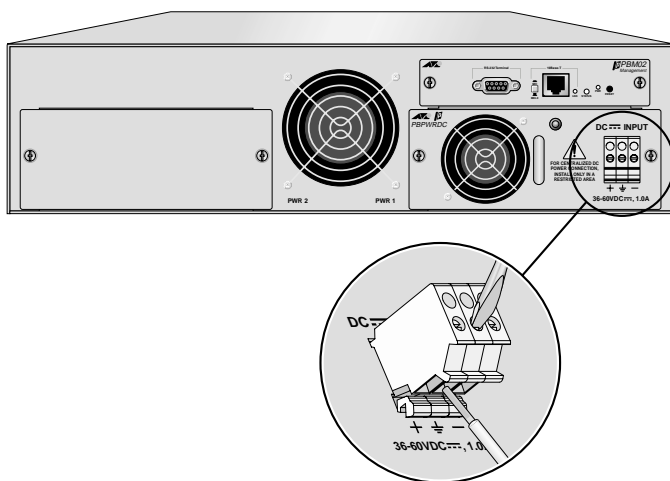


Figure 9 Connecting the Stripped Wire

- e. Connect the positive feed wire to the terminal block marked + (positive).
- f. Connect the negative feed wire to the terminal block marked - (negative).

**Warning**

Safety Hazard - Check to see if there are any exposed copper strands coming from the installed wires. When this installation is done correctly there should be no exposed copper wire strands extending from the terminal block. Any exposed wiring can conduct harmful levels of electricity to persons touching the wires. ⚡ 19

- g. Secure the tray supply cable near the rack using multiple cable ties (not provided). This will help minimize the chance of the connections being disturbed by casual contact with the wiring. It is recommended that you use at least four cable ties 10 centimeters (4 inches) apart with the first one located within 15 centimeters (6 inches) of the terminal block.

Note

This system will work with a positive grounded or negative grounded DC system. ⚡ 20

- h. Connect the three DC wires to a DC power source.
6. Verify that the PWR1 LED on the front of the chassis is green. If the LED is OFF, refer to “Troubleshooting” on page 31 for further instructions.

The PowerBlade PBC18 is now ready to be used. Proceed to Chapter 3 for instructions on installing a PowerBlade Series Switch or Media Converter Module.

Installing the PowerBlade PBC18 in a Rack

The chassis can be installed in a 19-, 23-, or 25-inch rack. It is recommended that you install the chassis in the rack before installing the PowerBlade modules.

For rackmount installation, perform the following procedure:

1. Remove the rubber feet from the bottom of the chassis, if attached, as shown in Figure 10.

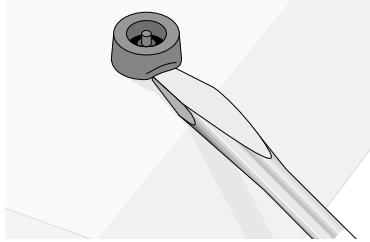
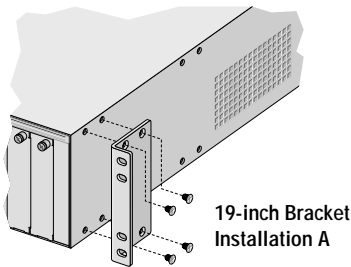
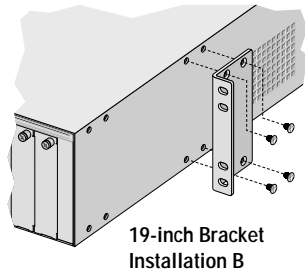


Figure 10 Removing the Rubber Feet

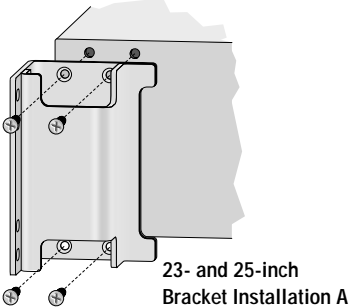
2. Attach the brackets to either the front or middle of the side of the chassis, as shown in Figure 11.



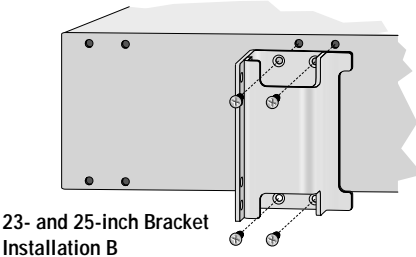
19-inch Bracket
Installation A



19-inch Bracket
Installation B



23- and 25-inch
Bracket Installation A



23- and 25-inch Bracket
Installation B

Figure 11 Attaching the Brackets to the PowerBlade PBC18

Note

The chassis may be heavy and awkward to lift. It is recommended that you get assistance with the next step.

3. Attach the chassis to the rack with 4 screws (not provided) for each side. See Figure 12.

Note

The brackets are designed to be installed in the center of a 3U high opening on a standard rack.

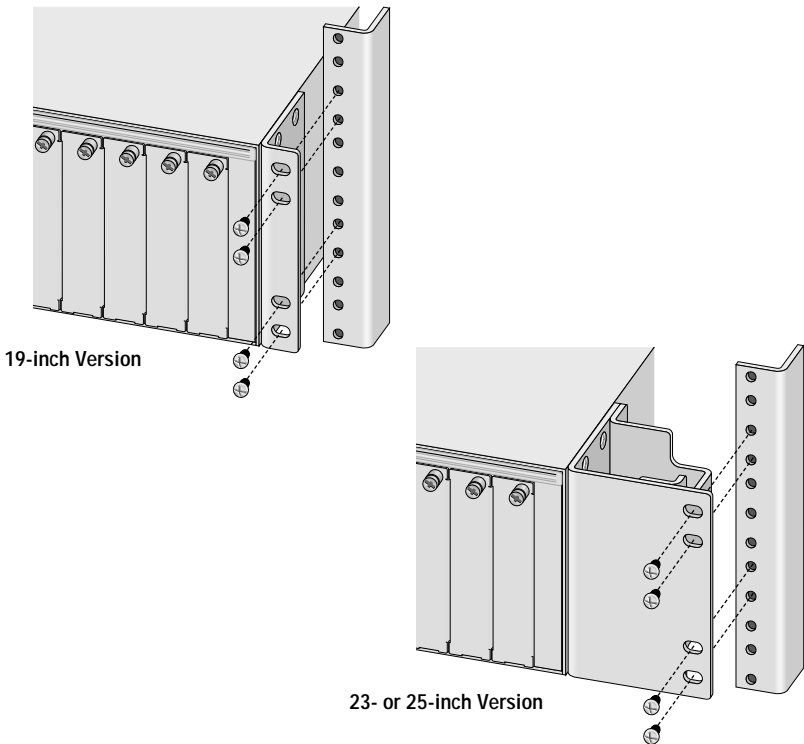


Figure 12 Installing the Chassis to a Rack

**Caution**

Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord. (AC model only.) 10

4. Apply power to the chassis by connecting the AC power cord or DC wires. Refer to page 11, Step 4 for an AC unit or Step 5 for a DC unit.

Note

If you purchased an optional management module, install the module before applying power to the chassis. Refer to “Installing an Optional Management Module” on page 27 for instructions.

The PowerBlade PBC18 is now ready for use. Proceed to Chapter 3 for instructions on installing a PowerBlade Series Switch or Media Converter Modules.

Warranty Registration

When you have finished installing the product, you should register your product by completing the enclosed warranty card and sending it in.

Chapter 3

Installing PowerBlade Switch and Media Converter Modules

This chapter explains how to install PowerBlade Series Switch and Media Converter Modules in the PowerBlade PBC18.

Note

Refer to the *PowerBlade PBC18 Installation Guide* for troubleshooting, switch settings, topologies or cabling specifications for your specific PowerBlade module. This guide can be found on Allied Telesyn's web site at **www.alliedtelesyn.com**.

To install a PowerBlade module in the chassis, perform the steps below:

1. Remove a blank faceplate from the chassis' front panel by loosening the thumbscrew. A PowerBlade module can be installed in any expansion slot. See Figure 13.

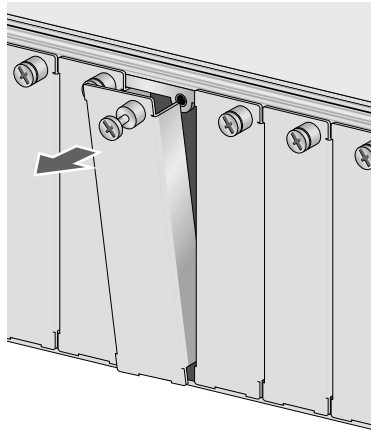


Figure 13 Removing a Blank Faceplate

Note

Do not remove a blank faceplate covering an expansion slot unless you intend to install a PowerBlade module.

2. Remove the PowerBlade Switch or Media Converter module from the shipping package and store the packaging material in a safe location.



Caution

Wear a grounding device and observe electrostatic discharge precautions when installing the PowerBlade module in the chassis. Failure to observe this caution could result in damage to the PowerBlade module.

3. Slide the module gently into place, aligning it with the guiderail, until it firmly connects to the chassis' backplane. See Figure 14.

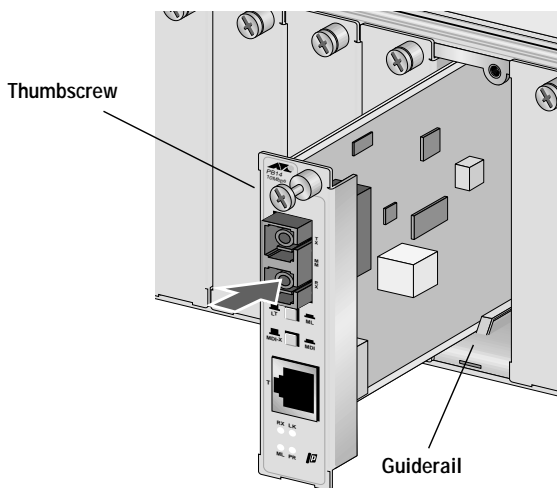


Figure 14 Installing a PowerBlade Module

4. Secure the module to the chassis by tightening the thumbscrew.
5. Verify that the PR LED on the module is green. If the LED is OFF, refer to "Troubleshooting" on page 31 for instructions.
6. Verify the MissingLink/Link Test (ML/LT) button is set correctly. Refer to the *PowerBlade PBC18 Installation Guide* for instructions.
7. Connect the appropriate data cables.

The PowerBlade module is now ready for use. Repeat this procedure to install additional PowerBlade Switch or Media Converter modules.

Hot Swapping a PowerBlade Switch or Media Converter Module

To hot swap a PowerBlade module, perform the following procedure:

1. Remove the data cables from the failed module.
2. Loosen the thumbscrew and gently slide out the failed module.
3. Remove the new module from the shipping package and store the packaging material in a safe location.



Caution

Wear a grounding device and observe electrostatic discharge precautions when installing the PowerBlade module in the chassis. Failure to observe this caution could result in damage to the PowerBlade module.

4. Slide the module gently into place, aligning it with the guiderail, until it firmly connects to the chassis' backplane. See Figure 14.
5. Secure the new module to the chassis by tightening the thumbscrew.
6. Repeat Step 5 through Step 7 in the previous procedure to complete the installation.

Chapter 4

Installing a Power Supply Module

The PowerBlade PBC18 has two expansion slots: one for the main power supply and one for an optional power supply. The power module installed in the PWR 1 expansion slot is referred to as the main power supply. The power module installed in the PWR 2 expansion slot is referred to as the optional power supply.

An optional power supply, when installed, shares the load of powering the chassis with the main power supply. This is known as “load-sharing.” In the event the main power supply fails, the optional power supply will provide full power to the chassis, thereby preventing a system failure.

The main and optional power supply can be “hot swapped,” meaning that should either power supply fail, the failed power supply can be removed and replaced with a new power module while the chassis is operating. Network operation will not be interrupted. The power modules to be hot swapped must be the same type. You cannot install an AC power supply and a DC power supply together in the same chassis.

Powering ON or OFF the chassis depends on the type of power supply installed. For an AC model, you connect or disconnect the power cord. For a DC model, you connect or disconnect the DC power cables or power OFF the DC circuit to which the power supply is connected.

The PowerBlade Optional Power Modules are available in two models, AT-PBPWRAC for an AC powered chassis and AT-PBPWRDC for a DC powered chassis. Figure 15 and Figure 16 illustrate the two different power supply modules.

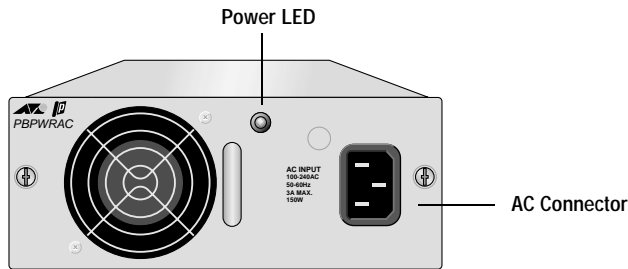


Figure 15 AT-PBPWRAC Power Supply Module

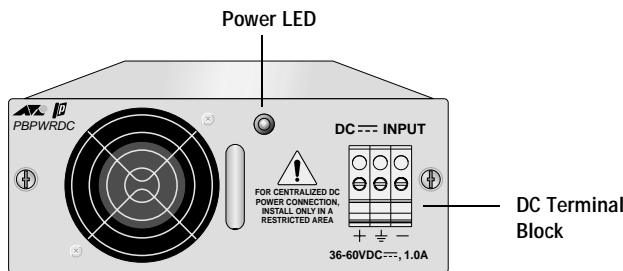


Figure 16 AT-PBPWRDC Power Supply Module

Installing a Main Power Supply

To install a main power supply, perform the following procedure:

1. Remove the PWR 1 blank faceplate from the back of the chassis by loosening the two thumbscrews, as shown in Figure 17.

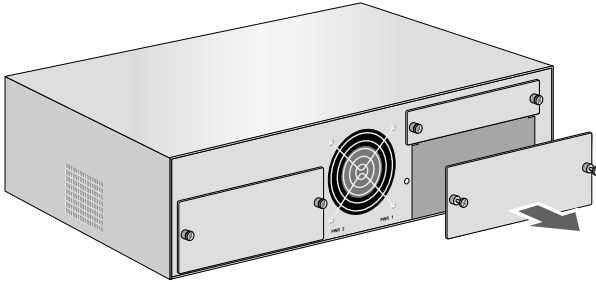


Figure 17 Removing the Main Power Supply Blank Faceplate

2. Remove the power supply for the shipping package and store the packaging material in a safe location.
3. Slide the power supply into the slot, gently seating the power supply's connector into the chassis' backplane. See Figure 18.

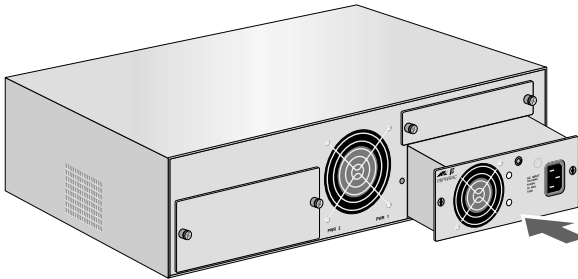


Figure 18 Installing the Main Power Supply

4. Secure the power supply to the chassis by tightening the two thumbscrews.
5. Apply power to the module by connecting the AC power cord or DC wires. Refer to page 11, Step 4 for an AC unit or Step 5 for a DC unit.
6. The power supply's Power LED should be ON. If the LED is OFF, refer to "Troubleshooting" on page 31 for instructions.

The PowerBlade PBC18 is now ready for use.

Installing an Optional Power Supply

When installing an optional power supply, it is not necessary to power OFF the chassis.

To install an optional power supply, perform the following procedure:

1. Remove the PWR 2 blank faceplate from the back of the chassis by loosening the two thumbscrews, as shown in Figure 19.

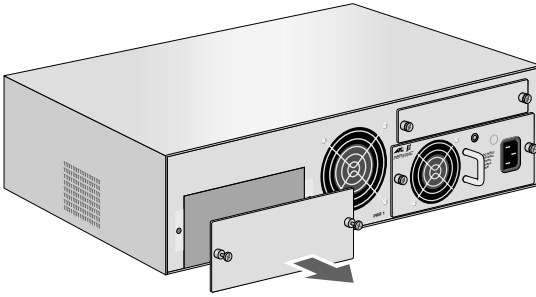


Figure 19 Removing the Optional Power Supply Blank Faceplate

2. Remove the power supply for the shipping package and store the packaging material in a safe location.
3. Slide the optional power supply into the slot, gently seating the power supply's connector into the chassis' backplane. See Figure 20.

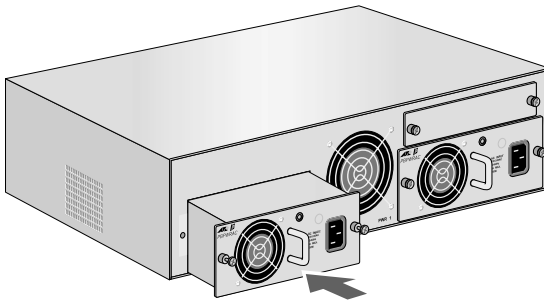


Figure 20 Installing an Optional Power Supply

4. Secure the optional power supply to the chassis by tightening the two thumbscrews.

Note

It is recommended that you connect the main and optional power supplies to separate AC outlets or DC circuits to increase the protection to your chassis from operational failure.

5. Apply power to the module by connecting the AC power cord or DC wires. Refer to page 11, Step 4 for an AC unit or Step 5 for a DC unit.
6. The power supply's Power LED should be ON. If the LED is OFF, refer to "Troubleshooting" on page 31 for instructions.

The PowerBlade PBC18 is now ready for use.

Hot Swapping a Power Supply

Both the main and optional power supplies are hot swappable. The power modules to be hot swapped must be the same type. AC and DC power supplies cannot be used together in the same chassis.

1. To remove a failed power module, you must power OFF the appropriate power source. To do this, perform one of the following:
 - ☐ For an AC model, unplug the power cord from the power outlet and then unplug the power cord from the failed module.
 - ☐ For a DC model, follow the steps below:



Warning

When installing this equipment, always ensure that the frame ground connection is installed first and disconnected last. ⚡ 18

- a. Remove the positive and negative feed wires from the terminal block by loosening the screws to the wire connections with a flathead screwdriver.
 - b. Remove the frame ground wire from the terminal block by loosening the screw to the wire connection with a flathead screwdriver.
2. Loosen the two thumbscrews and slide out the failed power supply.
 3. Remove the new power supply from the shipping package and store the packaging material in a safe location.

4. Slide the new power supply into the expansion slot, gently seating the power supply's connector into the chassis' backplane.
5. Secure the new power supply to the chassis by tightening the two thumbscrews.

Note

It is recommended that you connect the main and redundant power supplies to separate outlets or DC circuits to increase the protection to your chassis from operational failure.

6. Apply power to the new module by connecting the AC power cord or DC wires. Refer to page 11, Step 4 for an AC unit or Step 5 for a DC unit.
7. The new power supply's LED should be ON. If the LED is OFF, refer to "Troubleshooting" on page 31 for instructions.

The PowerBlade PBC18 is now ready for use.

Chapter 5

Installing an Optional Management Module

The management module is an optional unit used to monitor the operating status of the PowerBlade Switch and Media Converters Modules installed in the chassis. The management module expansion slot is located on the back of the PBC18 chassis. Refer to Figure 2 on page 2. The management module is not required for normal network operations, but it is necessary if you want to locally or remotely monitor and configure the modules and ports. The management module is shipped with the AT-S31 management software pre-installed.

The management module features a RS-232 terminal port with a DB-9 connector. The terminal port is used for local management. The management module also features a 10Base-T twisted pair port with an RJ-45 connector. The twisted pair port is used for remote management. The RJ-45 has a maximum operating distance of 100 meters (328 feet) and supports 10 Mbps half-duplex operation.

The management module features Link, Power, and Status LEDs, as well as a Reset button. See Figure 21. The LEDs and the Reset button are duplicated on the front of the chassis for easy monitoring or to reset the management module. Refer to the *PowerBlade Chassis Installation Guide* for additional information on the features, functions, and cable specifications of the management module. This guide can be downloaded for our web site.

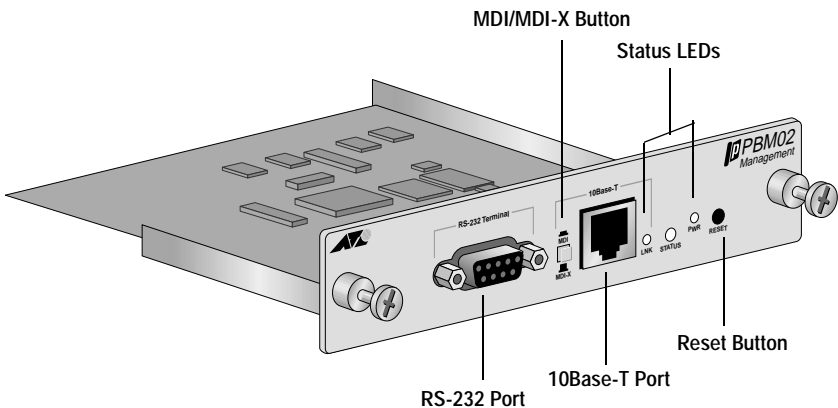


Figure 21 Optional Management Module (AT-PBM02 Model)

Installing an Optional Management Module

To install an optional management module, perform the following procedure:



Warning

Installing an optional management module while the chassis is powered ON could result in damage to the module.

1. Power OFF the chassis by performing one of the following:

- ☐ For an AC model, unplug the power cord from the power outlet and then unplug the power cord from the chassis.
- ☐ For a DC model, follow the steps below:



Warning

When installing this equipment, always ensure that the frame ground connection is installed first and disconnected last. [See 18](#)

- a. Remove the positive and negative feed wires from the terminal block by loosening the screws to the wire connection with a flathead screwdriver.
 - b. Remove the frame ground wire from the terminal block by loosening the screw to the wire connection with a flathead screwdriver.
2. Remove the blank faceplate covering the management module expansion slot by loosening the two thumbscrews. See Figure 22.

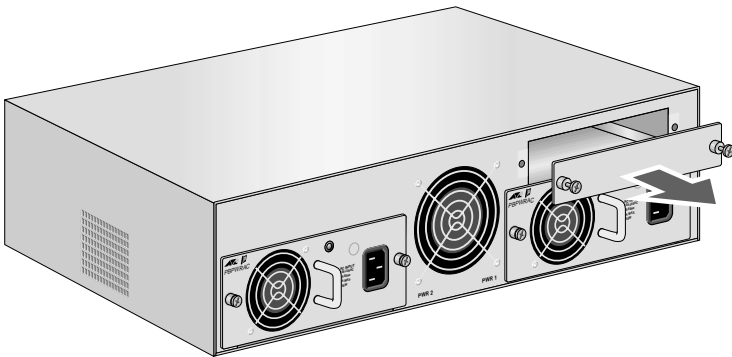


Figure 22 Removing the Management Module Blank Faceplate

3. Remove the management module from the shipping package and store the packaging material in a safe location.



Caution

Wear a grounding device and observe electrostatic discharge precautions when installing the PowerBlade module in the chassis. Failure to observe this caution could result in damage to the PowerBlade module.

4. Slide the management module gently into place, seating the module's connectors into the chassis' backplane. See Figure 23.

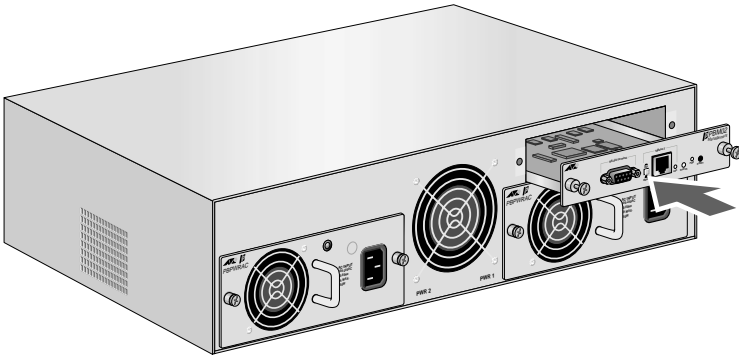


Figure 23 Installing a Management Module

5. Secure the management module to the chassis by tightening the two thumbscrews.
6. Apply power to the chassis by connecting the AC power cord or DC wires. Refer to page 11, Step 4 for an AC unit or Step 5 for a DC unit.
7. Check to be sure that the Status and PWR LED on the front of the management module are green. If one or both of the LEDs are OFF, refer to "Troubleshooting" on page 31 for instructions.
8. For local management, attach one end of the RS-232 cable with the DB-9 connector to the RS-232 port on the management module and the other end of the cable to a terminal or PC with a terminal emulator program.
9. For remote management, connect a Category 3 or better twisted pair cable with an RJ-45 connector to the 10Base-T port on the management module and the other end of the cable to 10 Mbps or 10/100 Mbps port on an Ethernet hub or switch.

10. Check to be sure that the LNK LED is green. If the LED is OFF, press the MDI/MDI-X button to the MDI-X (OUT) position.

The management module is now ready to be configured. To manage and configure the PowerBlade Optional Management Module, refer to the *AT-S31 User's Guide*. This guide can be downloaded from Allied Telesyn's web site at **www.alliedtelesyn.com**.

Chapter 6

Troubleshooting

Follow the guidelines in this section for testing and troubleshooting the installation in the event a problem occurs.

1. Verify that the PWR1 main power supply and PWR2 optional power supply LEDs are green. If one of the LEDs is OFF, do the following:
 - Check to be sure that the power supply is securely connected to the power outlet.
 - Check to be sure that the power supply is securely seated in the chassis.
 - For a DC unit, check to be sure that the wires are connected to the correct terminals.
2. Reset the management module by pressing and holding either the Reset button on the front of the PowerBlade PBC18 or on the management module for about 1 second. The Status LED will flash once, after which the management module is ready for use.



Caution

Using the Reset button will briefly interrupt network operations on 100 Mbps PowerBlade Series Modules.

3. Check to be sure that the fans are operating. If a fan is not operating, it is likely that a power supply has failed.

If you are still experiencing problems after testing and troubleshooting the installation, contact Allied Telesyn Technical Support for assistance. Refer to “Contacting Allied Telesyn Technical Support” on page viii or visit our web site at **www.alliedtelesyn.com** for support information.

For information on troubleshooting a specific PowerBlade module, refer to the *PowerBlade PBC18 Installation Guide*.

Appendix A

Technical Specifications

Physical Characteristics

	W x D x H
Dimensions:	44.1 cm x 48.3 cm x 1.7 cm (17.3 in x 19 in x 4.4 in)
Weight:	7.65 kg (17 lbs)

Temperature

Maximum Operating:	0° C to 50° C (32° F to 122° F)
Maximum Storage:	-25° C to 70° C (-13° F to 158° F)
Humidity:	5% to 95% maximum (non-condensing)

Power Requirements

Input Supply Voltage	
AC:	110 to 240 V AC, 3A maximum
DC:	48 V DC, 3A maximum
AC Input Frequency:	50/60 Hz \pm 3%
Power Consumption:	35 watts maximum

Agency Certifications

Electrical Safety:	UL1950 (UL/cUL), TUV (EN60950), NOM and CE
EMI/RFI:	FCC Class A, EN55022 Class A, VCCI, EN610003-2, EN61000-3-3
Immunity:	EN55024

Appendix B

Translated Safety Statements

Important: This appendix contains multiple-language translations for the safety statements in this guide.

Wichtig: Dieser Anhang enthält Übersetzungen der in diesem Handbuch enthaltenen Sicherheitshinweise in mehreren Sprachen.

Vigtigt: Dette tillæg indeholder oversættelser i flere sprog af sikkerhedsadvarslerne i denne håndbog.

Belangrijk: Deze appendix bevat vertalingen in meerdere talen van de veiligheidsopmerkingen in deze gids.

Important: Cette annexe contient la traduction en plusieurs langues des instructions de sécurité figurant dans ce guide.

Tärkeää: Tämä liite sisältää tässä oppaassa esiintyvät turvaohjeet usealla kielellä.

Importante: questa appendice contiene traduzioni in più lingue degli avvisi di sicurezza di questa guida.

Viktig: Dette tillegget inneholder oversettelser til flere språk av sikkerhetsinformasjonen i denne veiledningen.

Importante: Este anexo contém traduções em vários idiomas das advertências de segurança neste guia.

Importante: Este apéndice contiene traducciones en múltiples idiomas de los mensajes de seguridad incluidos en esta guía.

Obs! Denna bilaga innehåller flerspråkiga översättningar av säkerhetsmeddelandena i denna handledning.

Standards: This product meets the following standards.

U.S. Federal Communications Commission

Radiated Energy










Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.





Note: Modifications or changes not expressly approved of by the manufacturer or the FCC, can void your right to operate this equipment.

Industry Canada

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

- | | | |
|--|---|--|
| <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> | <p>RFI Emission</p> <p> Warning: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.</p> <p>Immunity</p> <p>Electrical Safety</p> <p> Laser</p> <p>Safety</p> <p> Warning: Class 1 Laser product.</p> <p> Warning: Do not stare into the laser beam.</p> <p> Electrical Notices</p> <p> Warning: Electric Shock Hazard</p> <p>To prevent electric shock, do not remove the cover. No user-serviceable parts inside. This unit contains hazardous voltages and should only be opened by a trained and qualified technician. To avoid the possibility of electric shock, disconnect electric power to the product before connecting or disconnecting the LAN cables.</p> <p> Lightning Danger</p> <p> Danger: Do not work on equipment or cables during periods of lightning activity.</p> <p> Caution: Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord.</p> | <p>EN55022 Class A, EN61000-3-2,
EN61000-3-3</p> <p>EN55024</p> <p>EN60950, UL1950 (UL/cUL)</p> <p>EN60825</p> |
|--|---|--|



- 11 Electrical - Type Class 1 Equipment This Equipment Must Be Earthed. Power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts.
- 12  Pluggable Equipment, the socket outlet shall be installed near the equipment and shall be easily accessible.
- 13  **Caution:** Air vents must not be blocked and must have free access to the room ambient air for cooling.
- 14  **Operating Temperature:** This product is designed for a maximum ambient temperature of 40° degrees C.
- 15  **All Countries:** Install product in accordance with local and National Electrical Codes.
- 16 As a safety precaution, a 10 Amp circuit breaker should be installed at the supply end of the cable to be used with this LAN equipment.

Always connect the wiring to the LAN equipment first before connecting the wiring to the breaker. To avoid the danger of physical injury from electrical shock, do not work with HOT feeds. Always be sure that the breaker is in the OFF position before connecting the wiring to the breaker.
- 17 **Warning:** Do not strip more than the recommended amount of wire. Stripping more than the recommended amount can create a safety hazard by leaving exposed wire on the terminal block after installation.
- 18 When installing this equipment, always ensure that the frame ground connection is installed first and disconnected last.
- 19 **Caution:** "Safety Hazard" Check to see if there are any exposed copper strands coming from the installed wire. When this installation is done correctly there should be no exposed copper wire strands extending from the terminal block. Any exposed wiring can conduct harmful levels of electricity to persons touching the wires.
- 20 This system will work with Positive grounded or Negative Grounded DC systems.
- 21 Lithium Battery - Should only be changed by trained and qualified technician.










Caution: Danger of explosion if battery incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Attention: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Normen: Dieses Produkt erfüllt die Anforderungen der nachfolgenden Normen.

- 1 Hochfrequenzstörung EN55022 Klasse A, EN61000-3-2, EN61000-3-3
- 2  **Warnung:** Bei Verwendung zu Hause kann dieses Produkt Funkstörungen hervorrufen. In diesem Fall müßte der Anwender angemessene Gegenmaßnahmen ergreifen.
- 3 Störsicherheit EN55024
- 4 Elektrische Sicherheit EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825








Sicherheit





- 6  **Warnung:** Laserprodukt der Klasse 1.
- 7  **Warnung:** Nicht direkt in den Strahl blicken.
- 8  **Achtung:** Gefährliche Spannung
Das Gehäuse nicht öffnen. Das Gerät enthält keine vom Benutzer wartbaren Teile. Das Gerät steht unter Hochspannung und darf nur von qualifiziertem technischem Personal geöffnet werden. Vor Anschluß der LAN-Kabel, Gerät vom Netz trennen.
- 9  **Gefahr Durch Blitzschlag**
Gefahr: Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen.
- 10  **Vorsicht:** Das netzkabel dient zum trennen der stromversorgung. Zur trennung vom netz, kabel aus der steckdose ziehen.
- 11 Geräte Der Klasse 1
Diese Geräte Müssen Geerdet Sein. Der Netzstecker darf nur mit einer vorschriftsmäßig geerdeten Steckdose verbunden werden. Ein unvorschriftsmäßiger Anschluß kann die Metallteile des Gehäuses unter gefährliche elektrische Spannungen setzen.
- 12  **Steckbares Gerät:** Die Anschlußbuchse sollte in der Nähe der Einrichtung angebracht werden und leicht zugänglich sein."
- 13  **Vorsicht:** Die Entlüftungsöffnungen dürfen nicht versperrt sein und müssen zum Kühlen freien Zugang zur Raumluft haben.
- 14  **Betriebstemperatur:** Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 40° C entworfen.
- 15  **Alle Länder:** Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.
- 16 **Warnung:** Aus Sicherheitsgründen sollte am Netzteilende des mit dieser LAN-Einrichtung verwendeten Kabels ein 10-Ampere-Leistungsschalter installiert werden.

Nehmen Sie stets zuerst die Verkabelung der LAN-Einrichtung vor, bevor Sie die Kabel an den Leistungsschalter anschließen. Arbeiten Sie nie mit spannungsführenden Kabeln, um Körperverletzungen durch Stromschlag zu vermeiden. Achten Sie stets darauf, daß sich der Leistungsschalter in der Position OFF (Aus) befindet, bevor Sie Kabel an den Leistungsschalter anschließen.

- 17 **Warnung:** Ziehen Sie nicht mehr als die empfohlene Drahtlänge ab. Wird mehr als die empfohlene Länge abisoliert, stellt dies ein Sicherheitsrisiko dar, da auf dem Anschlußklemmblock nach der Installation möglicherweise freiliegende Drähte verbleiben.
- 18 **Warnung:** Bei der Installation dieser Einrichtung ist stets sicherzustellen, daß der Masseanschluß jeweils zuerst installiert und zuletzt getrennt wird.
- 19 **Vorsicht:** "Sicherheitsrisiko" Prüfen Sie, daß aus dem installierten Draht keine freiliegenden Kupferlitzen herausragen. Bei korrekter Installation sollten aus dem Anschlußklemmblock keine freiliegenden Kupferlitzen vorstehen. Freiliegende Kabel führen genug Spannung, um Personen zu gefährden, die diese Drähte berühren.
- 20 **Hinweis:** Dieses System kann mit positiv geerdeten oder negativ geerdeten Gleichstromsystemen betrieben werden.
- 21 Lithium-Batterie - Sollte nur von einem geschulten qualifizierten Techniker ausgetauscht werden.
- Vorsicht:** Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Nur mit einer gleichen Batterie oder einem gleichwertigen Batterietyp nach Empfehlung des Herstellers ersetzen. Gebrauchte Batterien nach Anweisungen des Herstellers beseitigen.




Standarder: Dette produkt tilfredsstiller de følgende standarder.









- 1 Radiofrekvens forstyrrelsesemission EN55022 Klasse A, EN61000-3-2, EN61000-3-3
- 2  **Advarsel:** I et hjemligt miljø kunne dette produkt forårsage radio forstyrrelse. Bliver det tilfældet, påkræves brugeren muligvis at tage tilstrækkelige foranstaltninger.
- 3 Immunitet EN55024
- 4 Elektrisk sikkerhed EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825
- Sikkerhed**
- 6  **Advarsel:** Laserprodukt av klasse 1.
- 7  **Advarsel:** Stirr ikke på strålen.
- 8  **Elektriske Forholdsregler**
Advarsel: Risiko For Elektrisk Stød
 For at forebygge elektrisk stød, undlad at åbne apparatet. Der er ingen indre dele, der kan repareres af brugeren. Denne enhed indeholder livsfarlige strømspændinger og bør kun åbnes af en uddannet og kvalificeret tekniker. For at undgå risiko for elektrisk stød, afbrydes den elektriske strøm til produktet, før LAN-kablerne monteres eller afmonteres.
- 9  **Fare Under Uvejr**
Fare: Undlad at arbejde på udstyr eller kabler i perioder med lynaktivitet.
- 10  **Advarsel:** Den strømførende ledning bruges til at afbryde strømmen. Skal strømmen til apparatet afbrydes, tages ledningen ud af stikket.

- 11 Elektrisk - Klasse 1-udstyr
Dette Udstyr Kræver Jordforbindelse. Stikket skal være forbundet med en korrekt installeret jordforbunden stikkontakt. En ukorrekt installeret stikkontakt kan sætte livsfarlig spænding til tilgængelige metaldele.
- 12  Udstyr Til Stikkontakt, stikkontakten bør installeres nær ved udstyret og skal være lettilgængelig.
- 13  **Advarsel:** Ventilationsåbninger må ikke blokeres og skal have fri adgang til den omgivende luft i rummet for afkøling.
- 14  **Betjeningstemperatur:** Dette apparat er konstrueret til en omgivende temperatur på maksimum 40 grader C.
- 15  **Alle Lande:** Installation af produktet skal ske i overensstemmelse med lokal og national lovgivning for elektriske installationer.
- 16 **Advarsel:** Der bør indskydes en 10 A automatsikring på forsyningsenden af kablet til dette LAN-udstyr.

Man skal altid først forbinde ledningerne med LAN-udstyret inden de forbindes med automatsikringen. Ved ledningsarbejde skal strømmen altid være afbrudt til forebyggelse af fare for elektrisk stød. Man skal altid slukke automatsikringen inden man forbinder ledninger med den.
- 17 **Advarsel:** Man bør ikke afisolere mere af ledningerne end anvist, for så kan sådanne blanke ledninger udgøre et faremoment efter montering på klemmerækken.
- 18 **Advarsel:** Ved installering af dette udstyr skal stieljord altid forbindes først og aftages sidst.
- 19 Forsigtig: "Fare" Se omhyggeligt efter om der stikker blanke kobbertråde ud fra klemmeforbindelserne. Ved korrekt montering er det ikke tilfældet. Enhver afisolert leder kan lede farlig strømstyrke til personer, som kommer til at røre ved dem.
- 20 Bemærk: Dette udstyr kan køre både på jævnstrøm med positiv og med negativ jord.
- 21 Lithium batteri - Bør kun udskiftes af uddannet og kvalificeret tekniker.
Advarsel: Eksplosionsfare, hvis batteriet udskiftes ukorrekt. Udskift kun med samme eller en tilsvarende type der anbefales af producenten. Kassér brugte batterier i overensstemmelse med producentens instruktioner.












Eisen: Dit product voldoet aan de volgende eisen.

- | | | |
|---|---|--|
| 1 | RFI Emissie | EN55022 Klasse A, EN61000-3-2, EN61000-3-3 |
| 2 |  Waarschuwing: Binnenshuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen. | |
| 3 | Immunitet | EN55024 |
| 4 | Electrische Veiligheid | EN60950, UL1950 (UL/cUL) |
| 5 |  Veiligheid | EN60825 |
| 6 |  Waarshuwing: Klasse-1 laser produkt. | |






- 7  **Waarchuwing:** Neit in de straal staren.
- 8  **Waarschuwingen Met Betrekking Tot Elektriciteit**
Waarschuwing: Gevaar Voor Elektrische Schokken
 Verwijder het deksel niet, teneinde elektrische schokken te voorkomen. Binnenin bevinden zich geen onderdelen die door de gebruiker onderhouden kunnen worden. Dit toestel staat onder gevaarlijke spanning en mag alleen worden geopend door een daartoe opgeleide en bevoegde technicus. Om het gevaar op elektrische schokken te vermijden, moet u het toestel van de stroombron ontkoppelen alvorens de LAN-kabels te koppelen of ontkoppelen.
- 9  **Gevaar Voor Blikseminslag**
Gevaar: Niet aan toestellen of kabels werken bij bliksem.
- 10  **Waarschuwing:** Het toestel wordt uitgeschakeld door de stroomkabel te ontkoppelen. Om het toestel stroomloos te maken: De stroomkabel ontkoppelen.
- 11 Elektrische Toestellen Van Klasse 1
 Dit Toestel Moet Geaard Worden. De stekker moet aangesloten zijn op een juist geaarde contactdoos. Een onjuist geaarde contactdoos kan de metalen onderdelen waarmee de gebruiker eventueel in aanraking komt onder gevaarlijke spanning stellen.
- 12  **Aan Te Sluiten Apparatuur,** de contactdoos wordt in de nabijheid van de apparatuur geïnstalleerd en is gemakkelijk te bereiken."
- 13  **Opgelet:** De ventilatiegaten mogen niet worden gesperd en moeten de omgevingslucht ongehinderd toelaten voor afkoeling.
- 14  **Bedrijfstemperatuur:** De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 40 graden Celsius.
- 15  **Alle Landen:** het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.
- 16 **Waarschuwing:** Op de kabel die op de LAN-apparatuur wordt aangesloten dient een zekering van 10 amp te worden gemonteerd aan de zijde van de aansluiting op de voeding.
 Sluit bedrading altijd eerst op de LAN-apparatuur aan en pas daarna op de zekering. Voorkom het risico op een elektrische schok en schakel eerst de voeding uit. Controleer voordat u de bedrading op de zekering aansluit altijd of de zekering zich in de stand uit bevindt.
- 17 **Waarschuwing:** Verwijder niet meer dan de aanbevolen hoeveelheid isolatiemateriaal. Als u meer dan de aanbevolen hoeveelheid verwijdert, kan dit een veiligheidsrisico veroorzaken doordat draden bloot blijven liggen na aansluiting op het blok.
- 18 **Waarschuwing:** Zorg er tijdens installatie van de apparatuur altijd voor dat de aardeaansluiting van het frame als eerste wordt geplaatst en als laatste wordt losgemaakt.
- 19 Let op: "Veiligheidsrisico" Controleer of er bij de aangesloten bedrading geen koper blootligt. Als de installatie juist is uitgevoerd, is er bij het aansluitblok geen koperdraad zichtbaar. Blootliggende bedrading kan schadelijke elektriciteitsniveaus geleiden naar personen die met de draden in aanraking komen.
- 20 **Opmerking:** Dit systeem werkt met positief geaarde of negatief geaarde DC-systemen.

- 21 Lithium batterij. Mag alleen worden vervangen door een daartoe opgeleide en bevoegde technicus.
- Opgelet:** Gevaar voor ontploffing indien de batterij verkeerd wordt vergangen. Alleen vervangen door hetzelfde of een gelijkwaardig, door de fabrikant aanbevolen type.
















Normes: ce produit est conforme aux normes de suivantes:






- 1 Emission d'interférences radioélectriques EN55022 Classe A, EN61000-3-2, EN61000-3-3
- 2  **Mise En Garde:** dans un environnement domestique, ce produit peut provoquer des interférences radioélectriques. Auquel cas, l'utilisateur devra prendre les mesures adéquates.
- 3 Immunité EN55024
- 4 Sécurité électrique EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825
- Sécurité**
- 6  **Attention:** Produit laser di classe 1.
- 7  **Attention:** Ne pas fixer le faisceau des yeux.
- 8  **Information Sur Les Risques Électriques**
Avertissement: Danger D'électrocution
Pour éviter toute électrocution, ne pas ôter le revêtement protecteur du matériel. Ce matériel ne contient aucun élément réparable par l'utilisateur. Il comprend des tensions dangereuses et ne doit être ouvert que par un technicien dûment qualifié. Pour éviter tout risque d'électrocution, débrancher le matériel avant de connecter ou de déconnecter les câbles LAN.
- 9  **Danger De Foudre**
Danger: Ne pas manier le matériel ou les câbles lors d'activité orageuse.
- 10  **Attention:** Le cordon d'alimentation sert de mise hors circuit. Pour couper l'alimentation du matériel, débrancher le cordon.
- 11 Équipement De Classe 1 Électrique
Ce Matériel Doit Être Mis A La Terre. La prise de courant doit être branchée dans une prise femelle correctement mise à la terre car des tensions dangereuses risqueraient d'atteindre les pièces métalliques accessibles à l'utilisateur.
- 12  Équipement Pour Branchement Electrique, la prise de sortie doit être placée près de l'équipement et facilement accessible".
- 13  **Attention:** Ne pas bloquer les fentes d'aération, ceci empêcherait l'air ambiant de circuler librement pour le refroidissement.
- 14  **Température De Fonctionnement:** Ce matériel est capable de tolérer une température ambiante maximum de ou 40 degrés Celsius.
- 15  **Pour Tous Pays:** Installer le matériel conformément aux normes électriques nationales et locales.
- 16 **Avertissement:** Par mesure de sécurité, un disjoncteur de 10 A doit être installé au point d'alimentation électrique du câble devant être utilisé avec cet équipement de réseau local (LAN).

Connectez toujours le câblage à l'équipement LAN avant de le connecter au disjoncteur. Pour éviter tout risque de blessure corporelle par électrocution, ne travaillez pas lorsque le matériel est sous tension. Assurez-vous toujours que le disjoncteur est bien en position d'arrêt avant de le connecter au câblage.

-  **17** **Avertissement:** Ne coupez pas une quantité de câble supérieure à celle qui est recommandée. Cela pourrait constituer un risque de sécurité en laissant du câblage à nu sur le bornier après l'installation.
-  **18** **Avertissement:** Lors de l'installation de cet équipement, vérifiez toujours que la connexion de terre du châssis est installée en premier et débranchée en dernier.
-  **19** **Attention:** "Risque de sécurité" Vérifiez qu'aucun fil de cuivre dénudé ne sort du câble installé. Lorsque cette installation est effectuée correctement, aucun fil de cuivre ne devrait dépasser du bornier. Tout câblage dénudé peut être conducteur de tensions dangereuses pour les personnes touchant les câbles.
-  **20** **Remarque:** Ce système peut fonctionner avec des systèmes C.C. dotés d'une mise à la terre positive ou négative.
-  **21** Pile en Lithium--Doit uniquement être remplacée par un technicien dûment qualifié
- Attention:** Un danger d'explosion existe en cas de remplacement incorrect de la pile. Remplacer uniquement avec une pile du même type ou d'un type recommandé par le fabricant. Mettre au rebut les piles usagées conformément aux instructions du fabricant.

Standardit: Tämä tuote on seuraavien standardien mukainen.



-  **1** Radioaaltojen häirintä EN55022 Luokka A, EN61000-3-2, EN61000-3-3
-  **2**  **Varoitus:** Kotiolosuhteissa tämä laite voi aiheuttaa radioaaltojen häirintä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin.
-  **3** Kestävyys EN55024
-  **4** Sähköturvallisuus EN60950, UL1950 (UL/cUL)
-  **5**  **Laser** EN60825
- Turvallisuus**
-  **6**  **Varoitus:** Luokan 1 Lasertuote.
-  **7**  **Variotus:** Älä katso säteeseen.
-  **8**  **Sähköön Liittyviä Huomautuksia**
- Varoitus:** Sähköiskuvaara
- Estääksesi sähköiskun älä poista kantta. Sisällä ei ole käyttäjän huollettavissa olevia osia. Tämä laite sisältää vaarallisia jännitteitä ja sen voi avata vain koulutettu ja pätevä teknikko. Vältäaksesi sähköiskun mahdollisuuden katkaise sähkövirta tuotteeseen ennen kuin liität tai irrotat paikallisverkon (LAN) kaapelit.
-  **9**  **Salamaniskuvaara**
- Hengenvaara:** Älä työskentele laitteiden tai kaapeleiden kanssa salamoinnin aikana.

- 10  **Huomautus:** Virtajohtoa käytetään virrankatkaisulaitteena. Virta katkaistaan irrottamalla virtajohto.
- 11 Sähkö - Tyypipiluekan 1 Laitteet
Tämä Laite Täytyy Maadoittaa. Pistoke täytyy liittää kunnollisesti maadoitettuun pistorasiaan. Virheellisesti johdotettu pistorasia voi altistaa metalliosat vaarallisille jännitteille.
- 12  **Pistorasiaan Kytkettävä Laite:** pistorasia on asennettava laitteen lähelle ja siihen on oltava esteetön pääsy."
- 13  **Huomautus:** Ilmavaihtoreikiä ei pidä tukkia ja niillä täytyy olla vapaa yhteys ympäröivään huoneilmaan, jotta ilmanvaihto tapahtuisi.
- 14  **Käyttölämpötila:** Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 40°C.
- 15  **Kaikki Maat:** Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääräysten mukaisesti.
- 16 Varoitus: Tämän LAN-laitteen kanssa käytettävän kaapelin syöttöpäähän tulee turvallisuussyistä asentaa 10 A virrankatkaisin.










Yhdistä johdot aina ensin LAN-laitteeseen ennen virrankatkaisimeen kytkemistä. Sähköiskusta johtuvien vammojen välttämiseksi älä käsittele jännitteellisiä johtoja. Varmista aina, että virrankatkaisin on pois päältä (OFF) ennen kuin yhdistät johdot katkaisimeen.
- 17 **Varoitus:** Älä poista johtimesta päällystettä enempää kuin on suositeltu. Päällysteen poistaminen suositusta pidemmältä matkalta voi aiheuttaa turvallisuusriskin, sillä riviliittimeen jää asennuksen jälkeen paljaita johtimia.
- 18 **Varoitus:** Kun asennat tätä laitetta, varmista aina, että runkomaadoitettu liitin kytketään ensin ja irrotetaan viimeiseksi.
- 19 **Huomio:** Turvallisuusriski Tarkista, ettei asennetusta johtimesta näy paljaita kuparisäikeitä. Kun asennus suoritetaan oikein, riviliittimestä ei pitäisi näkyä paljaita kuparijohdinsäikeitä. Paljaat johtimet voivat aiheuttaa sähköiskuvaaran, jos niihin kosketaan.
- 20 **Huomaa:** Tämä järjestelmä toimii positiivisesti tai negatiivisesti maadoitettujen tasavirtajärjestelmien kanssa.
- 21 Litiumparisto - Vaihdon voi suorittaa vain koulutettu ja pätevä teknikko.

Varoitus: Räjähdyksvaara, jos paristo on vaihdettu väärin. Vaihda vain samaan tai vastaavaan tyyppiin, jota valmistaja suosittelee. Hävitä käytetyt paristot valmistajan ohjeiden mukaan.

Standard: Questo prodotto è conforme ai seguenti standard.












- 1 Emissione RFI (interferenza di radiofrequenza) EN55022 Classe A, EN61000-3-2, EN61000-3-3
- 2  **Avvertenza:** in ambiente domestico questo prodotto potrebbe causare radio interferenza. In questo caso potrebbe richiedersi all'utente di prendere gli adeguati provvedimenti.
- 3 Immunità EN55024
- 4 Sicurezza elettrica EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825

Norme Di Sicurezza

- 6  **Avvertenza:** Prodotto laser di Classe 1.
- 7  **Avvertenza:** Non fissare il raggio con gli occhi.
- 8  **Avvertenze Elettriche**
Attenzione: Pericolo Di Scosse Elettriche
 Per evitare scosse elettriche non asportare il coperchio. Le componenti interne non sono riparabili dall'utente. Questa unità ha tensioni pericolose e va aperta solamente da un tecnico specializzato e qualificato. Per evitare ogni possibilità di scosse elettriche, interrompere l'alimentazione del dispositivo prima di collegare o staccare i cavi LAN.
- 9  **Pericolo Di Fulmini**
Pericolo: Non lavorare sul dispositivo o sui cavi durante precipitazioni temporalesche.
- 10  **Attenzione:** Il cavo di alimentazione è usato come dispositivodi disattivazione. Per togliere la corrente al dispositivo staccare il cavo di alimentazione.
- 11 Eletticità - Dispositivi Di Classe 1
 Questo Dispositivo Deve Avere La Messa A Terra. La spina deve essere inserita in una presa di corrente specificamente dotata di messa a terra. Una presa non cablata in maniera corretta rischia di scaricare una tensione pericolosa su parti metalliche accessibili.
- 12  **Apparecchiatura Collegabile, la presa va installata vicino all'apparecchio per risultare facilmente accessibile".**
- 13  **Attenzione:** le prese d'aria non vanno ostruite e devono consentire il libero ricircolo dell'aria ambiente per il raffreddamento.
- 14  **Temperatura Di Funzionamento:** Questo prodotto è concepito per una temperatura ambientale massima di 40 gradi centigradi.
- 15  **Tutti I Paesi:** installare il prodotto in conformità delle vigenti normative elettriche nazionali.
- 16 **Avvertenza:** A titolo di cautelativo, installare un interruttore di sicurezza da 10 ampere sull'estremità in entrata del cavo di alimentazione di questa apparecchiatura LAN.
 Collegare sempre il cablaggio prima all'apparecchiatura LAN e poi all'interruttore. Per evitare i infortuni causati da folgorazione, non lavorare su cavi sotto tensione. Prima di collegare il cavo all'interruttore di sicurezza, accertarsi sempre che quest'ultimo sia disinserito.
- 17 **Avvertenza:** Per evitare i possibili pericoli associati all'esposizione dei fili sulla morsettiera dopo l'installazione, non rimuovere l'isolamento oltre le misure specificate.
- 18 **Avvertenza:** Quando si installa questo apparecchio, accertarsi sempre che il collegamento a massa del telaio sia sempre il primo ad essere effettuato e l'ultimo ad essere scollegato.
- 19 **Attenzione:** "Pericolo!" Controllare che il filo installato non abbia trefoli in rame esposti. Se l'installazione è stata effettuata in modo corretto, non vi deve protrudere dalla morsettiera alcun trefolo in rame esposto. In caso di contatto, un filo esposto può condurre livelli di elettricità pericolosi a quanti lo tocchino.
- 20 **Nota:** Questo sistema funziona con sistemi a CC con massa positiva o negativa.

- 21 Batteria al litio - Va sostituita solo da un tecnico specializzato e qualificato.
- Attenzione:** l'errata sostituzione della batteria può causare pericolo di esplosioni. Sostituire solamente con lo stesso tipo o con uno equivalente raccomandato dal produttore. Eliminare le batterie usate secondo le istruzioni del produttore.



Sikkerhetsnormer: Dette produktet tilfredsstiller følgende sikkerhetsnormer.

- 1 RFI stråling EN55022 Klasse A, EN61000-3-2, EN61000-3-3
- 2  **Advarsel:** Hvis dette produktet benyttes til privat bruk, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler.
- 3 Immunitet EN55024
- 4 Elektrisk sikkerhet EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825
- Sikkerhet**
- 6  **Advarsel:** Laserprodukt av klasse 1.
- 7  **Advarsel:** Stirr ikke på strålen.
- 8  **Elektrisitet**
Advarsel: Fare For Elektrisk Sjokk
For å unngå elektrisk sjokk, må dekslet ikke tas av. Det finnes ingen deler som brukeren kan reparere på innsiden. Denne enheten inneholder farlige spenninger, og må kun åpnes av en faglig kvalifisert tekniker. For å unngå elektrisk sjokk må den elektriske strømmen til produktet være avslått før LAN-kablene til- eller frakobles.
- 9  **Fare For Lynnedslag**
Fare: Arbeid ikke på utstyr eller kabler i tordenvær.
- 10  **Forsiktig:** Strømledningen brukes til å frakoble utstyret. For Å Deaktivisere utstyret, må strømforsyningen kobles fra.
- 11 Elektrisk - Type 1- Klasse Utstyr
Dette Utstyret Må Jordes. Strømkontakten må være tilkopleet en korrekt jordet kontakt. En kontakt som ikke er korrekt jordet kan føre til farlig spenninger i lett tilgjengelige metalleder.
- 12  Utstyr For Stikkontakt. Stikkontakten skal monteres i nærheten av utstyret og skal være lett tilgjengelig."
- 13  **Forsiktig:** Lufteventilene må ikke blokkeres, og må ha fri tilgang til luft med romtemperatur for avkjøling.
- 14  **Driftstemperatur:** Dette produktet er konstruert for bruk i maksimum romtemperatur på 40 grader celsius.
- 15  **Alle Land:** Produktet må installeres i samsvar med de lokale og nasjonale elektriske koder.
- 16 **Advarsel:** Av sikkerhetshensyn bør en automatsikring på 10 A monteres i forsyningsenden av kabelen som skal brukes sammen med dette LAN-utstyret.





Du skal alltid først kople ledningene til LAN-utstyret før du kople ledningene til automatsikringen. Arbeid aldri med ledninger uten at strømmen er slått av, ettersom det ellers kan være fare for personskader som følge av elektrisk støt. Pass alltid på at automatsikringer er slått av før du kople ledningene til automatsikringen.






- 17 **Advarsel:** Du skal ikke avisolere mer av ledningen enn det som er anbefalt. Dersom du avisolerer mer enn det som er anbefalt, kan dette forårsake en sikkerhetsfare, ettersom det vil finnes uisolert ledning på rekkeklemmen etter montering.
- 18 **Advarsel:** Når du monterer dette utstyret, skal du alltid passe på at forbindelsen til rammejordingen monteres først og koples fra sist.
- 19 **Forsiktig:** "Sikkerhetsfare" Kontroller om uisolerte koppertråder stikker ut av den monterte ledningen. Hvis monteringen er riktig utført, skal det ikke finnes uisolerte kobbertråder som stikker ut fra rekkeklemmen. Uisolerte ledninger kan lede skadelige mengder strøm til personer som berører ledningene.
- 20 **Merknad:** Systemet fungerer med positivt og negativt jordede likestrømssystemer.
- 21 Litiumbatteri - Må kun byttes ut av en faglig kvalifisert tekniker.
Forsiktig: Eksplosjonsfare hvis batteriet feilinnsettes. Batteriet må bare erstattes med samme type eller en tilsvarende type som er anbefalt av fabrikanten. Batteriene må kasseres i samsvar med fabrikantens instruksjoner.

Padrões: Este produto atende aos seguintes padrões.

- 1 Emissão de interferência de radiofrequência EN55022 Classe A, EN61000-3-2, EN61000-3-3
- 2  **Aviso:** Num ambiente doméstico este produto pode causar interferência na radiorrecepção e, neste caso, pode ser necessário que o utente tome as medidas adequadas.
- 3 Imunidade EN55024
- 4 Segurança Eléctrica EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825


Segurança

- 6  **Aviso:** Produto laser de classe 1
- 7  **Aviso:** Não olhe fixamente para o raio.
- 8  **Avisos Sobre Características Elétricas**
Atenção: Perigo De Choque Elétrico
Para evitar choque elétrico, não retire a tampa. Não contém peças que possam ser consertadas pelo usuário. Este aparelho contém voltagens perigosas e só deve ser aberto por um técnico qualificado e treinado. Para evitar a possibilidade de choque elétrico, desconecte o aparelho da fonte de energia elétrica antes de conectar e desconectar os cabos da LAN.
- 9  **Perigo De Choque Causado Por Raio**
Perigo: Não trabalhe no equipamento ou nos cabos durante períodos suscetíveis a quedas de raio.

- 10  **Cuidado:** O cabo de alimentação é utilizado como um dispositivo de desconexão. Para deseletrificar o equipamento, desconecte o cabo de alimentação.
- 11 Elétrico - Equipamentos Do Tipo Classe 1
Deve Ser Feita Ligação De Fio Terra Para Este Equipamento. O plugue de alimentação deve ser conectado a uma tomada com adequada ligação de fio terra. Tomadas sem adequada ligação de fio terra podem transmitir voltagens perigosas a peças metálicas expostas.
- 12  Equipamento De Ligação, a tomada eléctrica deve estar instalada perto do equipamento e ser de fácil acesso."
- 13  **Cuidado:** As aberturas de ventilação não devem ser bloqueadas e devem ter acesso livre ao ar ambiente para arrefecimento adequado do aparelho.
- 14  **Temperatura De Funcionamento:** Este produto foi projetado para uma temperatura ambiente máxima de 40 graus centígrados.
- 15  **Todos Os Países:** Instale o produto de acordo com as normas nacionais e locais para instalações elétricas.
- 16 **Aviso:** Como medida de precaução, deve instalar-se um disjuntor de 10 Amp na extremidade de alimentação do cabo a ser usado com este equipamento LAN.










Ligue sempre os cabos ao equipamento LAN primeiro antes de os ligar ao disjuntor. Para evitar o perigo de ferimentos por choque eléctrico, não trabalhe com alimentadores ligados. Verifique sempre se o disjuntor está na posição off (desligado) antes de ligar os cabos ao mesmo.
- 17 **Aviso:** Não corte mais fio do que recomendado. Cortar mais do que o recomendado pode ser perigoso, por deixar fio exposto no terminal depois da instalação.
- 18 **Aviso:** Ao ligar este equipamento, instale sempre primeiro a ligação à terra e desligue-a sempre em último.
- 19 **Atenção:** "Perigo" Verifique se há algum fio de cobre exposto a sair do fio instalado. Quando esta instalação é feita correctamente não deve haver qualquer fio de cobre exposto a sair do terminal. Qualquer fio exposto pode conduzir níveis perigosos de electricidade para a pessoa que toque nos fios.
- 20 **Nota:** Este sistema funciona com sistemas CC com ligações à terra Positivas ou Negativas.
- 21 Bateria de lítio - Só deve ser trocada por técnico qualificado e treinado.
Cuidado: Se a bateria não for devidamente instalada há perigo de explosão. Substitua somente pelo mesmo tipo ou equivalente, conforme recomendado pelo fabricante. Descarte baterias usadas, de acordo com as instruções fornecidas pelo fabricante.

Estándares: Este producto cumple con los siguientes estándares.

- 1 Emisión RFI EN55022 Clase A, EN61000-3-2, EN61000-3-3
- 2  **Advertencia:** En un entorno doméstico, este producto puede causar radiointerferencias, en cuyo caso, puede requerirse del usuario que tome las medidas que sean convenientes al respecto.
- 3 Inmunidad EN55024











- 4 Seguridad eléctrica EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825

Seguridad

- 6  ¡Advertencia! Producto láser Clase 1.
- 7  ¡Advertencia! No mirat fijamente el haz.
- 8  **Avisos Electricos**
Advertencia: Peligro De Electrochoque
 Para evitar un electrochoque, no quite la tapa. No hay ningún componente en el interior al cual puede prestar servicio el usuario. Esta unidad contiene voltajes peligrosos y sólo deberá abrirla un técnico entrenado y calificado. Para evitar la posibilidad de electrochoque desconecte la corriente eléctrica que llega al producto antes de conectar o desconectar los cables LAN.
- 9  **Peligro De Rayos**
Peligro: No realice ningún tipo de trabajo o conexion en los equipos o en los cables durante tormentas electricas.
- 10  **Atencion:** El cable de alimentacion se usa como un dispositivo de desconexion. Para desactivar el equipo, desconecte el cable de alimentación.
- 11 Electrico - Equipo Del Tipo Clase 1
 Este Equipo Tiene Que Tener Conexion A Tierra. El cable tiene que conectarse a un enchufe a tierra debidamente instalado. Un enchufe que no está correctamente instalado podría ocasionar tensiones peligrosas en las partes metálicas que están expuestas.
- 12  Equipo conectable, el tomacorriente se debe instalar cerca del equipo, en un lugar con acceso fácil".
- 13  **Atencion:** Las aberturas para ventilación no deberán bloquearse y deberán tener acceso libre al aire ambiental de la sala para su enfriamiento.
- 14  **Temperatura Requerida Para La Operación:** Este producto está diseñado para una temperatura ambiental máxima de 40 grados C.
- 15  **Para Todos Los Países:** Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.
- 16 **Advertencia:** Por razones de precaución, se debe instalar un cortacircuitos de 10 amperios en el extremo de alimentación del cable que se utilizará con este equipo LAN.
 Siempre conecte los cables al equipo LAN primero, antes de conectarlos al cortacircuitos. Para evitar el peligro de sufrir daños corporales a causa de sacudidas eléctricas, no trabaje con conductores con corriente. Asegúrese siempre de que el cortacircuitos esté en la posición de apagado (OFF) antes de conectar los cables al cortacircuitos.
- 17 **Advertencia:** No pele el cable más de la cantidad recomendada, ya que si después de instalar el bloque terminal quedan cables pelados, habrá riesgos de seguridad.
- 18 **Advertencia:** Cuando instale dicho equipo, asegúrese siempre de que el bastidor se conecte a tierra primero y se desconecte por último.

- 19 **Cuidado:** "Riesgo de seguridad" Cerciórese de que no haya hilos de cobre pelados que salgan del alambre instalado. Cuando dicha instalación se realiza correctamente, los hilos de cobre pelados no deben salir del bloque terminal. Todo alambre pelado puede conducir niveles de electricidad nocivos a la persona que lo toca.
- 20 **Nota:** Este sistema funcionará con sistemas de CC con conexión positiva o negativa a tierra.
- 21 Batería de litio - Sólo deberá ser cambiada por un técnico entrenado y calificado.
- Atencion:** Peligro de explosión si la batería no se reemplaza en forma correcta. Reemplace sólo con el mismo tipo o equivalente que recomienda el fabricante. Deseche las baterías usadas según las instrucciones del fabricante.

Standarder: Denna produkt uppfyller följande standarder.

- 1 Radiostörning EN55022 Klass A, EN61000-3-2, EN61000-3-3
- 2  **Varning:** Denna produkt kan ge upphov till radiostörningar i hemmet, vilket kan tvinga användaren till att vidtaga erforderliga åtgärder.
- 3 Immunitet EN55024
- 4 Elsäkerhet EN60950, UL1950 (UL/cUL)
- 5  Laser EN60825
- Säkerhet**
- 6  **Varning!** Laserprodukt av klass 1.
- 7  **Varning!** Laserstrålning när enheten är öppen.
- 8  **Tillkännagivanden Beträffande Elektricitetsrisk:**
Risk för elektrisk stöt för att undvika elektrisk stöt, ta ej av locket. Det finns inga delar inuti som behöver underhållas. Denna apparat är under högspänning och får endast öppnas av en utbildad kvalificerad tekniker. För att undvika elektrisk stöt, koppla ifrån produktens strömanslutning innan LAN-kablarna ansluts eller kopplas ur.
- 9  **Fara För Blixtnedslag**
Fara: Arbeta ej på utrustningen eller kablarna vid åskväder.
- 10  **Varning:** Nätkabeln används som strömbrytare för att koppla från strömmen, dra ur nätkabeln.
- 11 Elektriskt - Typ Klass 1 Utrustning
Denna Utrustning Måste Vara Jordad. Nätkabeln måste vara ansluten till ett ordentligt jordat uttag. Ett felaktigt uttag kan göra att närliggande metalldelar utsätts för högspänning. Apparaten skall anslutas till jordat uttag, när den ansluts till ett nätverk.
- 12  Utrustning Med Plugg. Uttaget skall installeras i utrustningens närhet och vara lättåtkomligt".
- 13  **Varning:** Luftventilerna får ej blockeras och måste ha fri tillgång till omgivande rumsluft för avsvälning.
- 14  **Drifttemperatur:** Denna produkt är konstruerad för rumstemperatur ej överstigande 40 grader Celsius.

- 15  **Alla Länder:** Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning.
- 16 **Varning:** Av säkerhetsskäl skall en 10 A automatsäkring anslutas till försörjningsänden på kabeln som används till denna LAN-utrustning.
Ledningar skall alltid anslutas till LAN-utrustningen innan ledningarna ansluts till automatsäkringen. För att förebygga uppkomsten av personskador orsakade av elektrisk stöt skall man inte vidröra strömförande uttag. Kontrollera alltid att automatsäkringen är i läget OFF (AV) innan anslutning av ledningar till automatsäkringen sker.
- 17 **Varning:** Skala inte av mer isolering än vad som anges ovan. Skalas för mycket isolering av kan fara uppstå om oskyddad tråd vidrörs på anslutningen.
- 18 **Varning:** Vid anslutning av denna utrustning skall man alltid se till att jordtråden ansluts först och lossas sist.
- 19 **Obs! Fara!** Kontrollera om små koppartrådar sticker ut ifrån den anslutna tråden. Om anslutningen utförts riktigt sticker inga trådar ut från anslutningsplinten. Oisolerade trådar kan överföra skadlig elektricitet till person som vidrör trådarna.
- 20 **Anmärkning:** Detta system fungerar både med positivt och negativt jordade likströmskällor.
- 21 Litium batteri - Får endast bytas av utbildade och kvalificerade tekniker.
Varning: Risk för explosion om felaktigt batteri används. Byt endast mot samma eller likvärdig typ batteri, rekommenderat av tillverkaren. Kassera använda batterier i enlighet med tillverkarens instruktioner.

